

## Department of Energy

## § 850.30

(d) The responsible employer must select for use by workers:

(1) Respirators approved by the National Institute for Occupational Safety and Health (NIOSH) if NIOSH-approved respirators exist for a specific DOE task; or

(2) Respirators that DOE has accepted under the DOE Respiratory Protection Acceptance Program if NIOSH-approved respirators do not exist for specific DOE tasks.

### § 850.29 Protective clothing and equipment.

(a) The responsible employer must provide protective clothing and equipment to beryllium workers and ensure its appropriate use and maintenance, where dispersible forms of beryllium may contact worker's skin, enter openings in workers' skin, or contact workers' eyes, including where:

(1) Exposure monitoring has established that airborne concentrations of beryllium are at or above the action level;

(2) Surface contamination levels measured or presumed prior to initiating work are above the level prescribed in § 850.30;

(3) Surface contamination levels results obtained to confirm housekeeping efforts are above the level prescribed in § 850.30; and

(4) Any beryllium-associated worker who requests the use of protective clothing and equipment for protection against airborne beryllium, regardless of measured exposure levels.

(b) The responsible employer must comply with 29 CFR 1910.132, Personal Protective Equipment General Requirements, when workers use personal protective clothing and equipment.

(c) The responsible employer must establish procedures for donning, doffing, handling, and storing protective clothing and equipment that:

(1) Prevent beryllium workers from exiting areas that contain beryllium with contamination on their bodies or their personal clothing; and

(2) Include beryllium workers exchanging their personal clothing for full-body protective clothing and footwear before they begin work in regulated areas.

(d) The responsible employer must ensure that no worker removes beryllium-contaminated protective clothing and equipment from areas that contain beryllium, except for workers authorized to launder, clean, maintain, or dispose of the clothing and equipment.

(e) The responsible employer must prohibit the removal of beryllium from protective clothing and equipment by blowing, shaking, or other means that may disperse beryllium into the air.

(f) The responsible employer must ensure that protective clothing and equipment is cleaned, laundered, repaired, or replaced as needed to maintain effectiveness. The responsible employer must:

(1) Ensure that beryllium-contaminated protective clothing and equipment, when removed for laundering, cleaning, maintenance, or disposal, is placed in containers that prevent the dispersion of beryllium dust and that are labeled in accordance with § 850.38 of this part; and

(2) Inform organizations that launder or clean DOE beryllium-contaminated protective clothing or equipment that exposure to beryllium is potentially harmful, and that clothing and equipment should be laundered or cleaned in a manner prescribed by the responsible employer to prevent the release of airborne beryllium.

### § 850.30 Housekeeping.

(a) Where beryllium is present in operational areas of DOE facilities, the responsible employer must conduct routine surface sampling to determine housekeeping conditions. Surfaces contaminated with beryllium dusts and waste must not exceed a removable contamination level of 3 µg/100 cm<sup>2</sup> during non-operational periods. This sampling would not include the interior of installed closed systems such as enclosures, glove boxes, chambers, or ventilation systems.

(b) When cleaning floors and surfaces in areas where beryllium is present at DOE facilities, the responsible employer must clean beryllium-contaminated floors and surfaces using a wet method, vacuuming or other cleaning methods, such as sticky tack cloths, that avoid the production of airborne

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dust. Compressed air or dry methods must not be used for such cleaning.

(c) The responsible employer must equip the portable or mobile vacuum units that are used to clean beryllium-contaminated areas with HEPA filters, and change the filters as often as needed to maintain their capture efficiency.

(d) The responsible employer must ensure that the cleaning equipment that is used to clean beryllium-contaminated surfaces is labeled, controlled, and not used for non-hazardous materials.

#### § 850.31 Release criteria.

(a) The responsible employer must clean beryllium-contaminated equipment and other items to the lowest contamination level practicable, but not to exceed the levels established in paragraphs (b) and (c) of this section, and label the equipment or other items, before releasing them to the general public or a DOE facility for non-beryllium use, or to another facility for work involving beryllium.

(b) Before releasing beryllium-contaminated equipment or other items to the general public or for use in a non-beryllium area of a DOE facility, the responsible employer must ensure that:

(1) The removable contamination level of equipment or item surfaces does not exceed the higher of 0.2  $\mu\text{g}/100\text{ cm}^2$  or the concentration level of beryllium in soil at the point of release, whichever is greater;

(2) The equipment or item is labeled in accordance with § 850.38(b); and

(3) The release is conditioned on the recipient's commitment to implement controls that will prevent foreseeable beryllium exposure, considering the nature of the equipment or item and its future use and the nature of the beryllium contamination.

(c) Before releasing beryllium-contaminated equipment or other items to another facility performing work with beryllium, the responsible employer must ensure that:

(1) The removable contamination level of equipment or item surfaces does not exceed 3  $\mu\text{g}/100\text{ cm}^2$ ;

(2) The equipment or item is labeled in accordance with § 850.38(b); and

(3) The equipment or item is enclosed or placed in sealed, impermeable bags

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or containers to prevent the release of beryllium dust during handling and transportation.

#### § 850.32 Waste disposal.

(a) The responsible employer must control the generation of beryllium-containing waste, and beryllium-contaminated equipment and other items that are disposed of as waste, through the application of waste minimization principles.

(b) Beryllium-containing waste, and beryllium-contaminated equipment and other items that are disposed of as waste, must be disposed of in sealed, impermeable bags, containers, or enclosures to prevent the release of beryllium dust during handling and transportation. The bags, containers, and enclosures that are used for disposal of beryllium waste must be labeled according to § 850.38.

#### § 850.33 Beryllium emergencies.

(a) The responsible employer must comply with 29 CFR 1910.120(l) for handling beryllium emergencies related to decontamination and decommissioning operations.

(b) The responsible employer must comply with 29 CFR 1910.120(q) for handling beryllium emergencies related to all other operations.

#### § 850.34 Medical surveillance.

(a) *General.* (1) The responsible employer must establish and implement a medical surveillance program for beryllium-associated workers who voluntarily participate in the program.

(2) The responsible employer must designate a Site Occupational Medical Director (SOMD) who is responsible for administering the medical surveillance program.

(3) The responsible employer must ensure that the medical evaluations and procedures required by this section are performed by, or under the supervision of, a licensed physician who is familiar with the health effects of beryllium.

(4) The responsible employer must establish, and maintain, a list of beryllium-associated workers who may be eligible for protective measures under this part. The list must be: